



LOADER

**MX C1**

**MX C2**

**MX 20Cu**

**MX 25Cu**

**MX 20C+**

**MX 25C+**

**MX 30C+**

## **User manual**

**Please read carefully before using MX  
loader**



Dear users,

Thanks you for confidence in our product. We are sure it will give you full satisfaction.

By taking a few minutes to read this manual, you will be able to obtain the best results from your MX loader, extend its lifespan and work in complete safety.

The loader user manual is a very important document, please keep it with you in order to be able to use it if required. Leave it available to any other user and give it to the next owner of this loader.

*Pictures and technical information included in this document may not correspond precisely to your loader; but the working conditions will be the same.*



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**The loader is a complex machine. The end user must read this instruction book before first use.**



## Familiarise yourself with:

- Safety instructions.
- Hitching and unhitching of the loader.
- Hitching and unhitching of the implements.
- Full use of the controls.

## 1. SAFETY INSTRUCTIONS

- Control the loader only from the driver's seat. Do not let go of the controls until the movements are complete.
- Do not leave the seat before locking the controls to prevent any movement.
- Never leave the tractor while its loader is lifted. Following loader use, park the tractor with the loader lowered to the ground.
- It is compulsory to ensure that nobody is in the area while the loader is in use.
- The operation must use the implement designed and recommended by MX for the work to be carried out.
- **The transport or elevation of persons using the loader is forbidden.**
- Ensure tractor stability by using a counterweight. Please check the information regarding the counterweight in this user manual.
- Restrict all movements while the load is lifted as the tractor may become unbalanced.
- The maximum front axle safe load provided by the tractor's manufacturer must not be exceeded.
- The maximum front tyres safe load provided by the tyres's manufacturer must not be exceeded.
- Check regularly tyres pressure.
- Regularly check the presence of safety pins and bolts. Do not replace with any other object such as nails, wire, etc.
- Hitch the loader only to a tractor fitted with a roll-over protective structure (ROPS) or a falling object protective structure (FOPS). This should be in the protective position when using the loader.
- Watch out for overhead electrical and telephone cables when manoeuvring with the loader in the raised position.
- In compliance with the standard EN 12525, the controls for operating the loader and implements must be of the «sustained action» type with the exception of the lift floating position which can be maintained in its position by a notching system.
- Any activity relating to defect investigation ( diagnosis ) and / or disassembly of parts may only be undertaken by an accredited professional who shall assure his safety and the protection of the environment in which the activity is conducted, in particular in the event of an activity involving the loader staying in the lifted position.

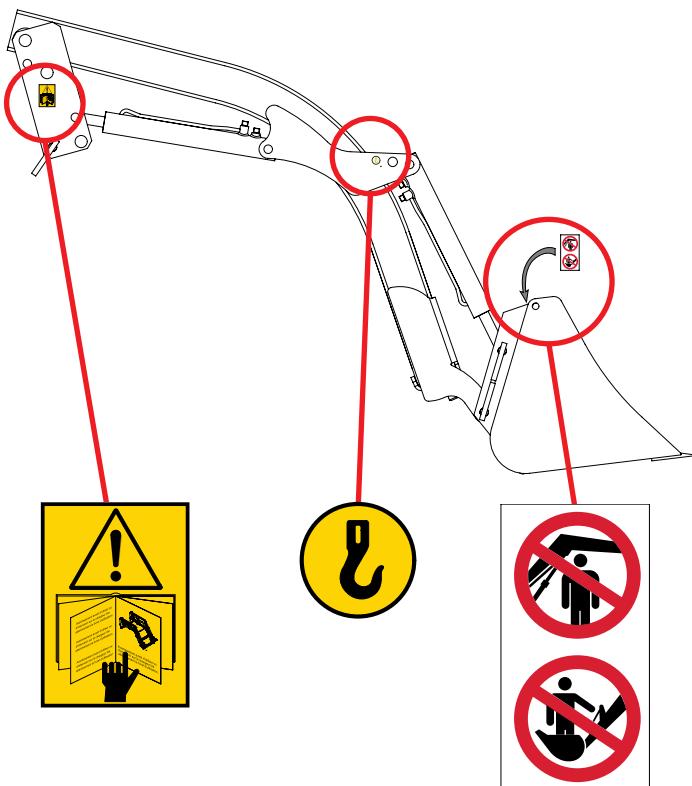


- The loader's hydraulic circuit is designed to have a maximum service pressure of 200 bar.
- Never modify hose connections.
- The breaking of the seals will result in the cancellation of the MX responsibility for all the equipment supplied.
- The assembly of an MX loader which excludes the recommendations in the MX price list in force at the purchase date, cancels the MX guarantee on all the equipment supplied.
- Any modification to a section of any MX equipment (implements, loader, bracket, etc.) or the use of an implement or element installed on the MX loader of foreign origin, cancels the MX guarantee for all equipment supplied.
- Use only MX original spare parts. Do not modify your MX loader or its accessories yourself or have another person modify them (mechanical, electrical, hydraulic, pneumatic characteristics), without prior written agreement from MX. Failure to respect these regulations may make the loader dangerous. MX will disclaim all responsibility in the event of damage or injury.
- The guarantee is immediately invalid when the instructions for use, and the MX loader maintenance schedule outlined in "User Manual" are not observed.

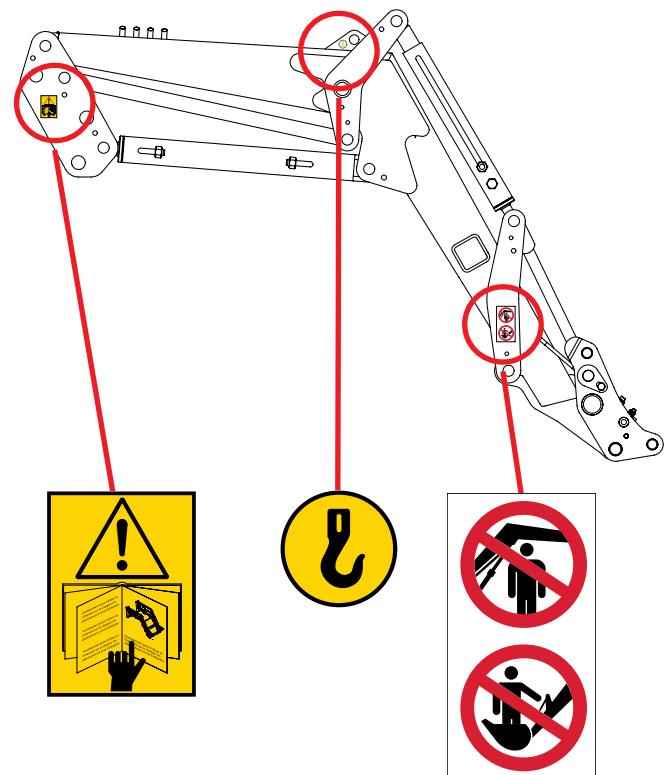
## 2. SAFETY STICKERS

Security stickers are located on the loader. Keep them readable and clean, and change them if damaged.

C1 and C2 loaders

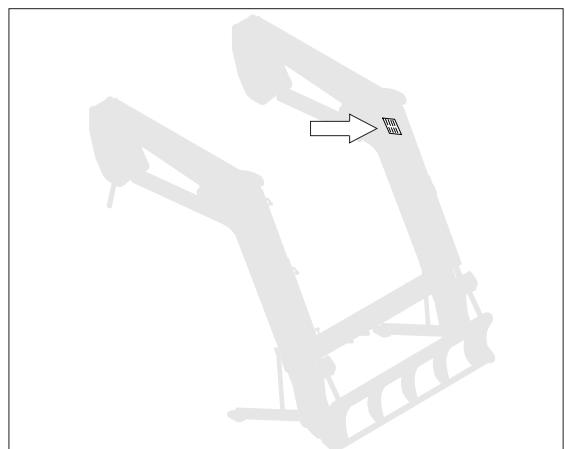


C+ and Cu loaders



## 3. IDENTIFICATION PLATE

The identification plate is located inside the LH arm, next to the implement level indicator.



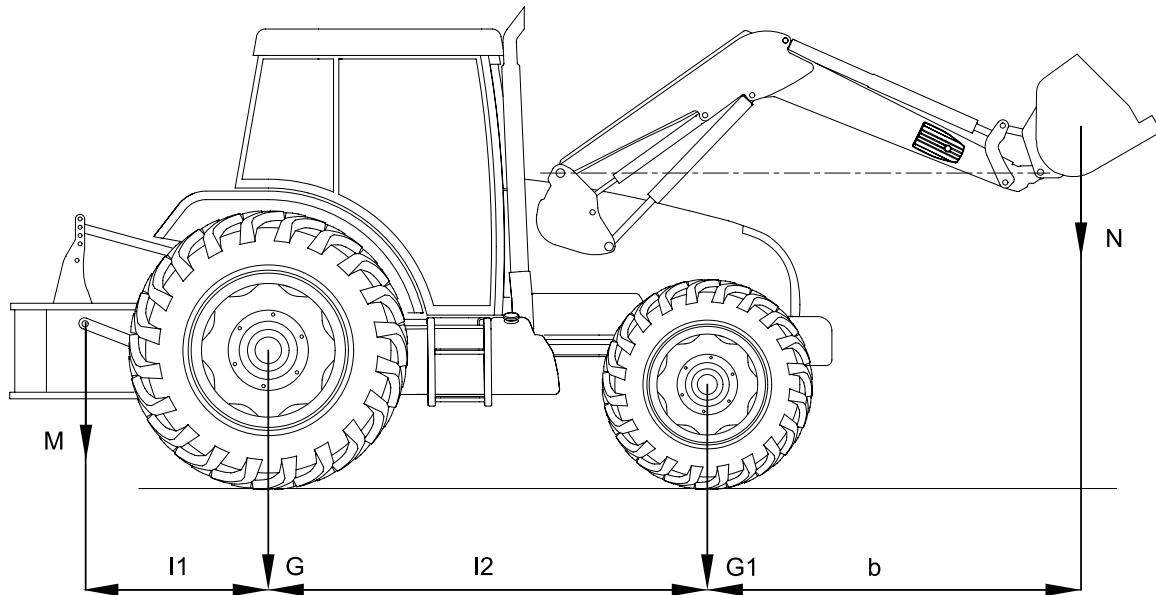
The serial number and loader type which are indicated on this plate might be requested when requiring spare parts or technical assistance.

<b>MX</b>	<b>CE</b>
19, rue de Rennes F - 35690 ACIGNÉ	
Désignation/ Designation	
Type / Model / Typ	
N° de série Serial number Seriennummer	
Poids à vide Unloaded weight / Leergewicht	
kg	328462

## 4. COUNTERWEIGHT

The stability of the tractor and loader can only be ensured with a counterweight on the rear of the tractor. This counterweight must ensure that a minimum of 20 % of the total weight (Tractor, loader, implement, maximum load and counterweight) is applied on the back axle of the tractor in order to work in a safe condition.

Below is the calculation method which indicates the required counterweight (M)



$$M \geq \frac{5N b + I_2 (P + N - 5G)}{5(I_1 + I_2) - I_2}$$

G : Weight on the rear axle, without counterweight, with an empty implement (kg).

G1 : Weight on the front axle, without counterweight, with an empty implement (kg).

b : Distance from the front axle to the implement centre of gravity (mm).

I1 : Distance from rear linkage pins to the rear axle (mm).

I2 : Wheelbase.

N : Loader payload at 2 m (Kg).

P : G + G1 (kg)

M : Weight of the counterweight (kg).

## 5. LOADER UNHITCHING



**Caution**

**This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.**

The loader must always be coupled to an implement to unhitch it.

- 5.1 Choose a flat and stable area.



- 5.2 Put the implement dumped on the ground slightly (20° approx.).

- 5.3 Fit the parking stand(s).

**C1 and C2 loaders**



**C+ and Cu loaders**



- 5.4 Remove the frame locking pins and insert them into the dedicated holes.



- 5.5** Lower the loader using the DA, to retract the lift rams.  
Crowd slightly to position the parking stands.



- 5.6** Crowd the implement slightly, driving forward to release the loader towers away from the bracket.

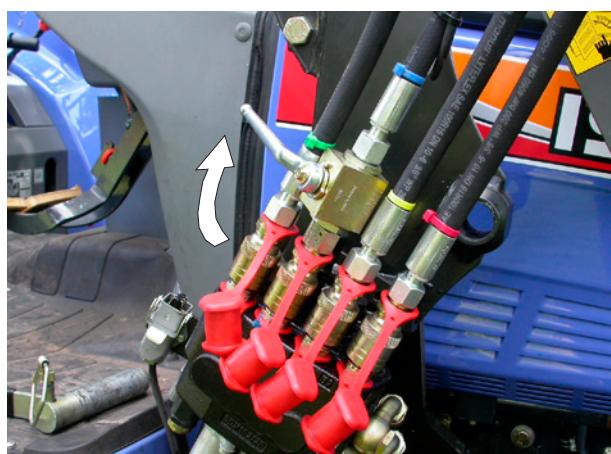
Pull the parking brake. Turn off the engine..



- 5.7** Completely decompress all the hydraulic circuits.



- 5.8** Close the tap and disconnect the hydraulic couplings.



- 5.9** Position the protective covers (clean) to the male and female couplings.  
Store the hoses on the loader.



- 5.10** Reverse the tractor a little, to clear the loader from the bracket.



## 6. LOADER HITCHING

- 6.1** Drive slowly forward so that the bracket is some 5cm away from the loader towers.

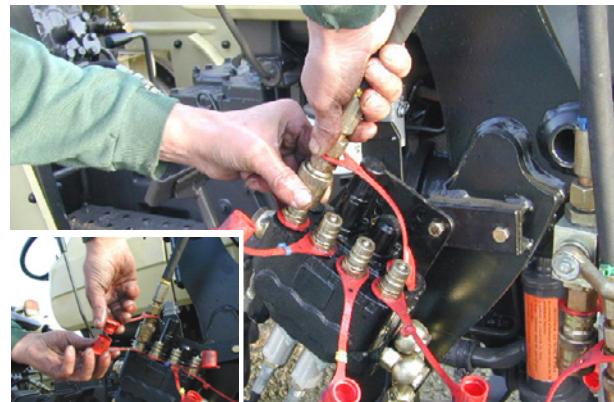
Pull the parking brake. Turn off the engine.



**6.2** Completely decompress all the hydraulic circuits.



**6.3** Connect the hydraulic couplers, matching the colour codes.



**6.4** Open the tap.



**6.5** Tip the implement so as to lift the front of the loader: by rotating it, the frames must fit into the bracket yokes.



- 6.6** Raise the implement horizontally to 0.30 m from the ground.



- 6.7** Lock the loader frame on the bracket with the pins and split pins.

Fold the parking stands away.



## 7. IMPLEMENT UNHITCHING - C+ LOADERS



### Caution

**This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.**

- 7.1** Select a stable parking area.  
Lower the implement horizontally to 0.30 m from the ground.

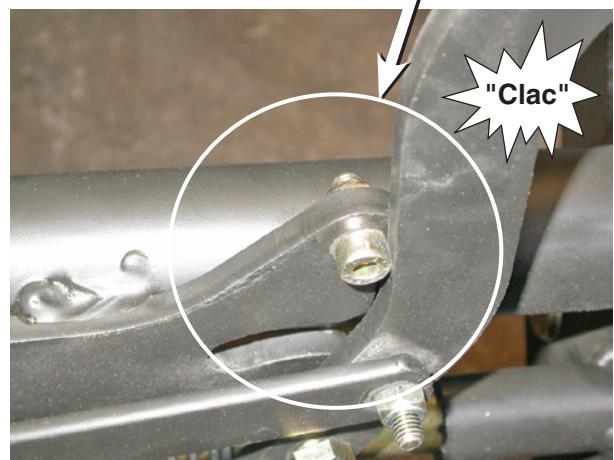
Pull the parking brake. Turn off the engine.



- 7.2** From the L.H. side of the loader, pull on the lever to the end.  
Never operate from the front of the implement.



- 7.3** Then, move the lever backwards to lock it (compressed springs).



- 7.4** Start the tracteur and lower the loader dumping the implement.  
As soon as it is down to the ground, slightly reverse the tractor in line while lowering the loader.

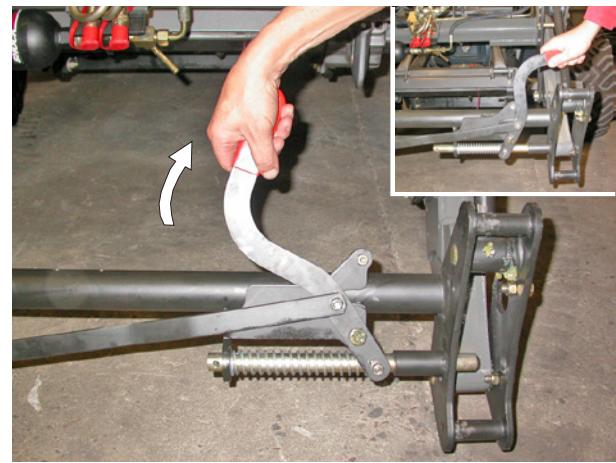


## 8. IMPLEMENT HITCHING - C+ LOADERS



This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.

- 8.1** Ensure that the locking lever is in the "HITCHING" position:  
pins retracted and the springs compressed.



- 8.2** Approach the loader in line with the implement, the tool carrier being slightly dumped.



- 8.3** Enter the hitch into the implement hooks.



- 8.4** Crowd the implement back while driving forwards until the unlocking lever is triggered.





## Checking before work.

Press on the ground to check if implement is correctly locked on the loader. Use D.A. mode. Maneuver each hydraulic service to its maximum, in each direction to check the correct operation of the hydraulic system and that there are no leaks.

## 9. IMPLEMENT UNHITCHING / HITCHING - Cu, C1 and C2 LOADERS

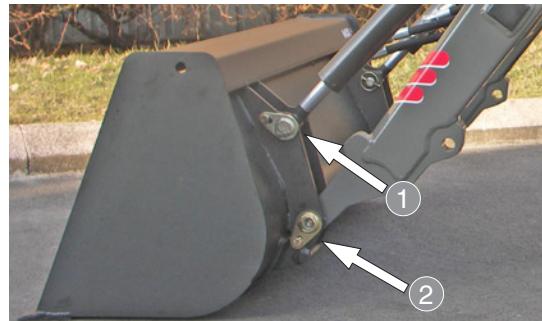
### 9.1 Implement unhitching

Select a stable parking area.

Position the implement on the ground.

Remove the split pins then the crowd ram-implement link pins ①.

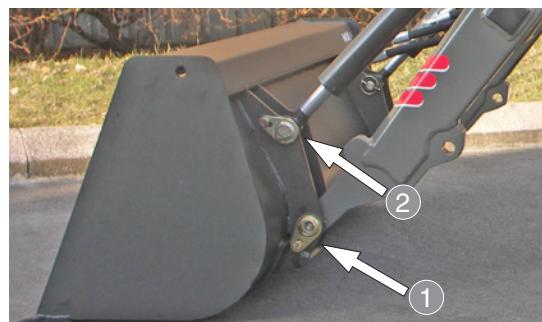
Remove the split pins then the boom-implement link pins ②.



### 9.2 Implement hitching

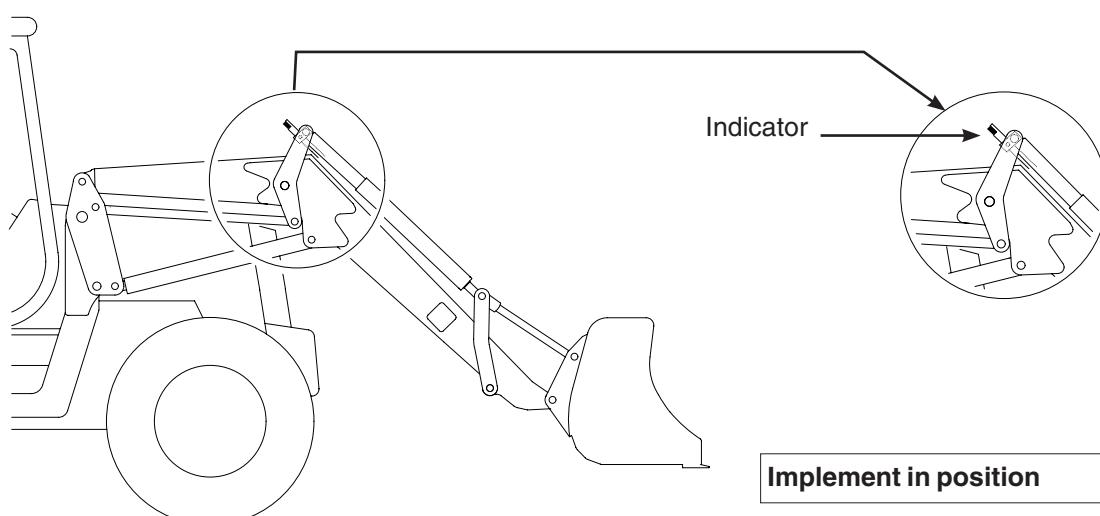
Fit the boom-implement link pins, then the split pins ①.

Fit the crowd ram link pins, then the split pins ②. Adjust the ram rod extension if necessary.



## 10. IMPLEMENT LEVEL INDICATOR - C+ loader

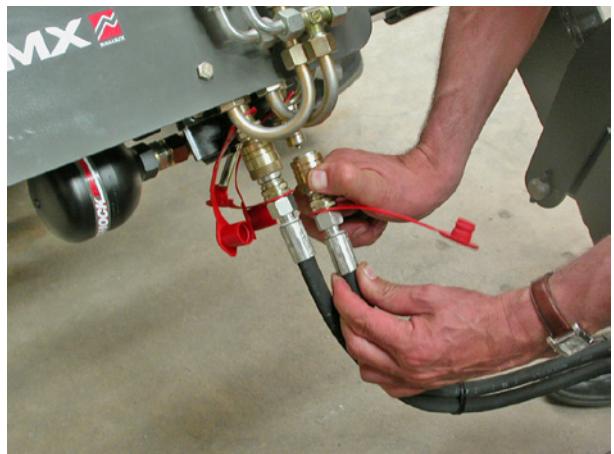
The implement level indicator is useful for implement repositioning. Efficient even while lowering the loader, it is adjustable according to the implement type.



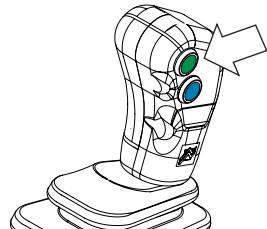
## 11. 3<sup>rd</sup> FUNCTION

The front couplers mounted on the loader cross beam are used to feed an implement w/ grab or any other attachment which requires a DA extra function (option).

The connection will be easier after the engine is turned off and the 3rd function residual pressure is released.



Crown and press the green switch at the same time to operate the 3rd service.



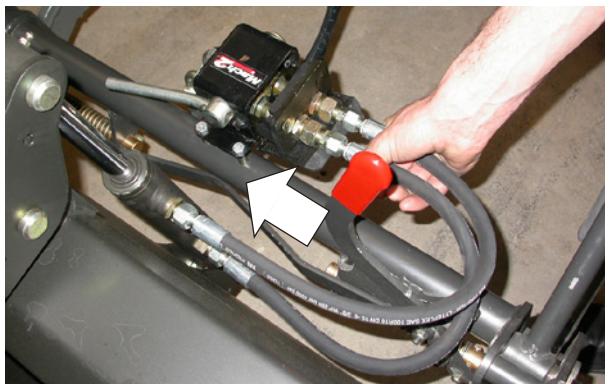
**Back-up control to be pressed if the solenoid valve locks.**



## 12. MACH 2

The Mach 2 (option) enables to instantly plug any implement hydraulic function without any effort.

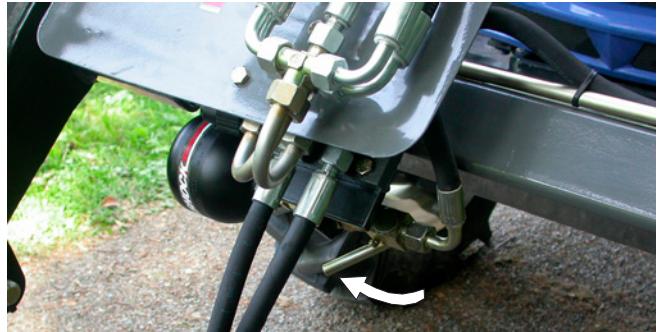
The Mach 2 kit includes 600 mm hoses to feed the MX implements.



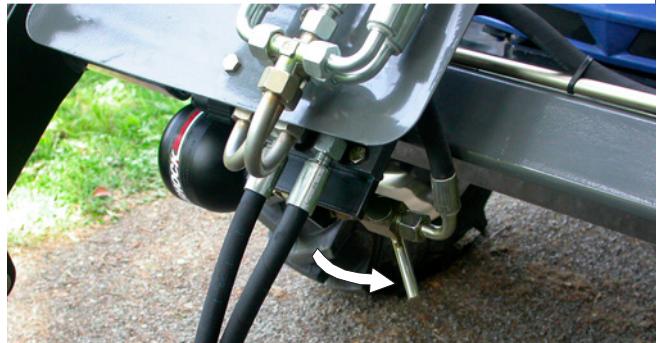
## 13. SHOCK ELIMINATOR

No shocks anymore when driving or when suddenly stop the loader during lowering (option).

Suspension off



Suspension on



## 14. LOADER MAINTENANCE



### Caution

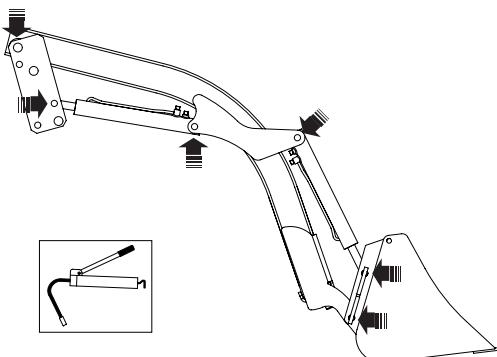
**Change the tractor hydraulic oil and filters regularly in accordance with the tractor manufacturer recommendations. Used oil does not lubricate, it also contributes to the damage of all hydraulic components (pump, valves, rams...).**

- 14.1** Clean the implement and the loader front after each use.

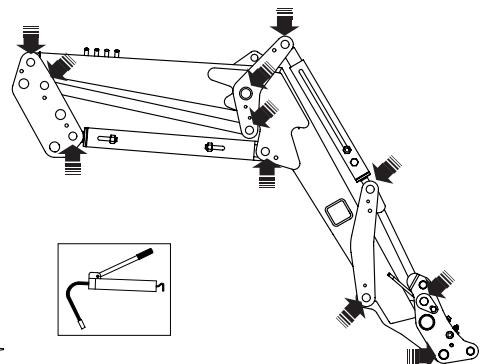
**CAUTION :** some detergents may attack the paint and steel of the loader.

- 14.2** Grease after each wash (grease eliminates water) and particularly after washing with a high pressure cleaner.

**C1 and C2 loaders**



**C+ and Cu loaders**



Check the following each month, and more frequently when used intensively:

- Condition of the loader articulations. If necessary, replace the wear bushes and/or the pins.  
The wear bushes must be replaced if they are less than 1 mm thick.
- The tractor's hydraulic oil level and the sealing of the hydraulic system. If you notice any internal or external leaks on the hydraulic parts (rams, hoses, connectors, Mach, couplings, etc.), contact your dealer.
- Condition of the hoses: replace them if you notice any small cracks or oil seepage.
- Correct operation of the monolever (cables, play, locking, etc.).
- Condition of the electric wiring. Please contact your dealer if there is any damage to connectors or cables.
- Mechanical condition (any cracking, deformation, fretting on stops, play, parking stands, etc.). Please contact your dealer if there is any abnormal wear.

Check the tightness of the bracket after 10, 50 hours then every 100 hours or when carrying out tractor maintenance. In case of untightness, please contact your dealer.

#### **IMPORTANT:**

All the screws needing to be retightened must be inspected, changed if necessary, cleaned and smeared with loctite.

Tighten the screws to the tightening torque specified in the table below.

Use of a pneumatic spanner to tighten the screws on the tractor is forbidden.

Tightening torque (Nm)

Thread	Class of bolt		
	8.8	10.9	12.9
<b>M 8</b>	21	29	35
<b>M 10</b>	42	58	70
<b>M 12</b>	72	101	121
<b>M 14</b>	114	160	193
<b>M 16</b>	174	245	295
<b>M 18</b>	240	340	405
<b>M 20</b>	340	475	570
<b>M 22</b>	455	640	765
<b>M 30 x 150</b>	500		
<b>M 40 x 150</b>	500		

## **15. TRACTOR MAINTENANCE**

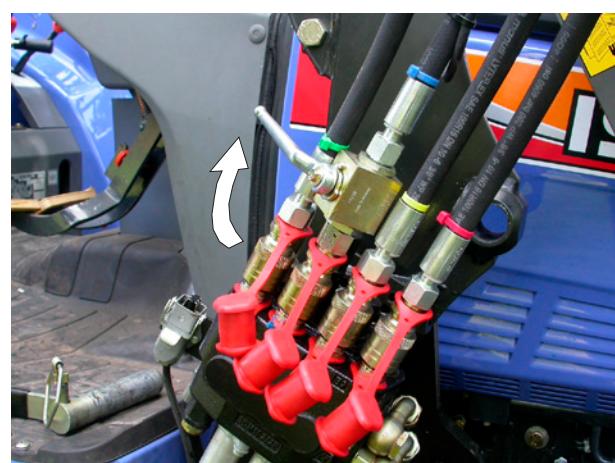
Pour les opérations d'entretien et de réglage du tracteur, il est vivement conseillé de dételer le chargeur.

Le dételage du chargeur est une opération simple et rapide qui offre les meilleures garanties de sécurité et d'efficacité pour l'entretien du tracteur et du chargeur.



**For any maintenance operations made whilst the loader is in the raised position, the loader must be locked into position**

**Close** the tap fitted on the lifting coupler.



## 16. SAFETY DEVICE ON LIFTING/CROWDING

If the loaders lifting operation requires people to be in the close proximity, the hydraulic circuit of the loader must have safety device fitted to it.

This in accordance with the standard EN 12525/A1, from July 2006.

## 17. CONTROL

**Important:** Never leave the tractor with loader in raised position.

All spool valves produce an internal leak required for correct operation.

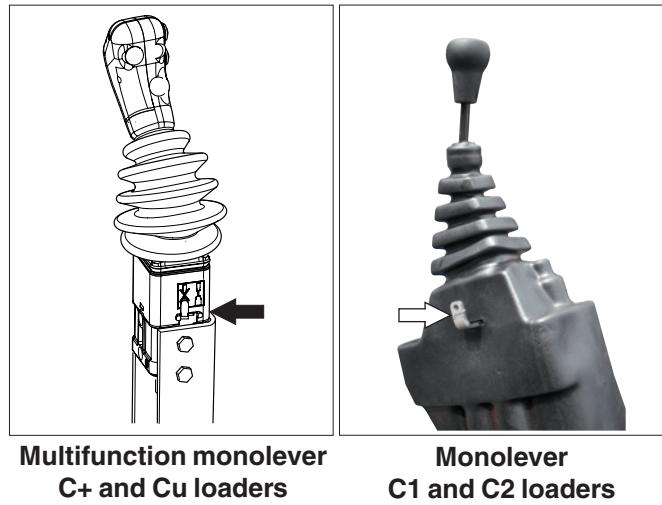
### 17.1 On tractor valves

Please report to the tractor's instruction book.

### 17.2 On MX valves:

#### 17.2.1 Security:

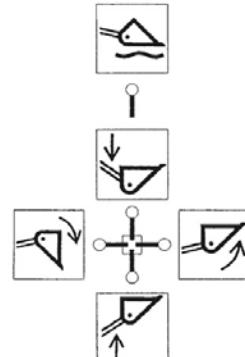
Involuntary loader manoeuvre can be avoided. The MX joystick can be locked. See diagram.



Multifunction monolever  
C+ and Cu loaders

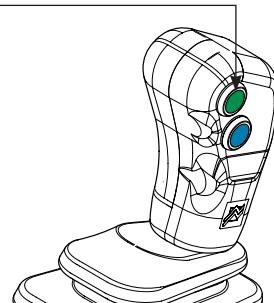
Monolever  
C1 and C2 loaders

#### 17.2.2 Lifting-crowding movements



#### 17.2.3 Other

3<sup>rd</sup> FUNCTION : \_\_\_\_\_  
Green button + Crowding.



## **18. GENERAL INFORMATION**

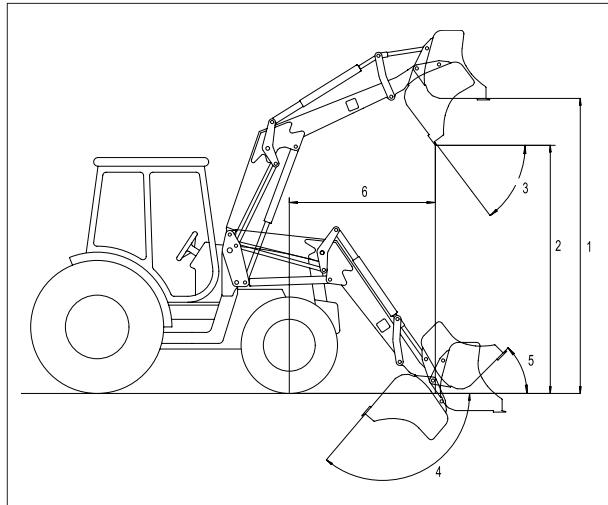
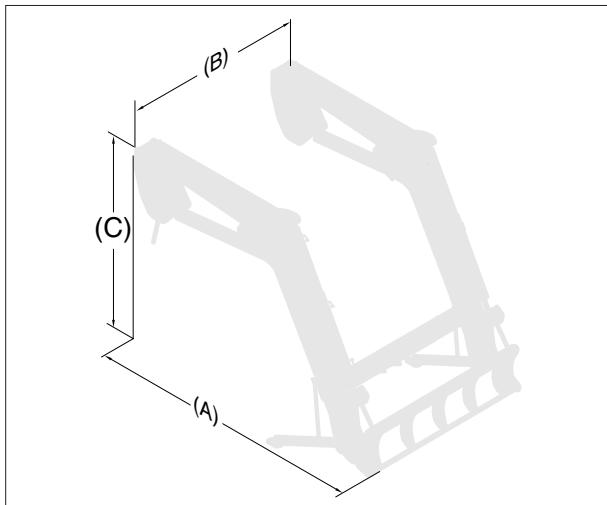
Each implement is designed for a specific use and has its own resistance limits.

Land clearing and stump extraction are forbidden. Such work should be carried out by a specialist vehicle and is not possible for an agricultural loader.

Use the tractor's power to enter in the material to be moved rather than approaching it with speed, which will generate high stress on tractor and loader.

When the load to be manoeuvred is too heavy, do not apply force to the hydraulic components. This also applies when rams are fully closed or extended. Please release the control lever.

## 19. TECHNICAL SPECIFICATIONS



	MX C1, C2	MX 20Cu	MX 20C+	MX 25Cu	MX 25C+	MX 30C+
Length : ( A )	1.20 m	1.45 m	1.45 m	1.60 m	1.60 m	1.75 m
Width : ( B )	0.90 m	0.90 m	0.90 m	0.90 m	0.90 m	1.05 m
Height : ( C )	1.05 m	1.05 m	1.05 m	1.20 m	1.20 m	1.25 m
Weight (Without option)	135 Kg (with implement)	130 Kg	140 Kg	140 Kg	165 Kg	205 Kg
Maximum height at implement pivot *	1.92 m	2.15 m	2.15 m	2.45 m	2.45 m	2.60 m
Maximum height under horizontal bucket (1) #	1.80 m	1.95 m	1.95 m	2.25 m	2.25 m	2.35 m
Maximum height under dumped bucket (2) #	1.50 m	1.60 m	1.60 m	1.90 m	1.90 m	2.00 m
Digging depth #	0.10 m	0.15 m	0.15 m	0.15 m	0.15 m	0.15 m
Dumping angle at maximum height (3) #	40°	35°	68°	35°	68°	68°
Dumping angle on the ground (4) #	125°	90°	90°	115°	115°	122°
Crowd angle (5) #	30°	25°	45°	25°	45°	45°
Forward reach available for discharge (6) #	900 mm	850-950 mm	850-950 mm	950-1050 mm	950-1050 mm	1050-1150 mm
Lift force at implement pivot * (Kg)	450 Kg	660 Kg	660 Kg	730 Kg	730 Kg	1400 Kg
Lift capacity at implement pivot over the entire lifting range * (Kg)	420 Kg	570 Kg	570 Kg	630 Kg	630 Kg	990 Kg
Payload on pallet 0.50 m in front of the forks						
At ground level (Kg)	390 Kg	470 Kg	490 Kg	510 Kg	540 Kg	1250 Kg
At 1 m height (Kg)	370 Kg	435 Kg	450 Kg	480 Kg	500 Kg	1100 Kg
At 2 m height (Kg)	–	395 Kg	410 Kg	425 Kg	450 Kg	930 Kg
At maximum height (Kg)	350 Kg	375 Kg	390 Kg	410 Kg	425 Kg	710 Kg
Lifting time (s)	3 sec	4.5 sec	4.5 sec	4.5 sec	4.5 sec	3.8 sec
Dumping time (s)	3 sec	2.2 sec	2.2 sec	2.5 sec	2.5 sec	3.3 sec

Data varies according to the type of tractor used.

Specifications measured at 140 bar and a flow rate of 15 litres/min for MX C1 and C2.

Specifications measured at 140 bar and a flow rate of 20 litres/min for MX 20Cu/20C+ and MX 25Cu/25C+.

Specifications measured at 180 bar and a flow rate of 30 litres/min for MX 30C+.

# Indicated data are with a loose material bucket.

\* Values at ground level and at implement pivot are not considered to be working data.

# DECLARATION OF CONFORMITY    CE

We manufacturer:

MX  
19,Rue de Rennes  
F - 35690 Acigné

Declare that the product:

**MX C1, MX C2, MX 20Cu, MX 20C+, MX 25Cu, MX 25C+, MX 30C+ loaders**

Comply with standard EN 12525, and its amendments A1 and A2, which presupposes compliance with the requirements of directive 2006/42 EC of the European Parliament and of the Council of 17 May 2006 on machinery.

Acigné, the 30th of June 2011.



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